

ABSTRACT OF THE DISCLOSURE

The present invention relates to different methods used for the production of tetrabasic lead sulfate by means of solid state reactions at high temperatures, which allow the formation of powders having a particle size of less than 10 μm . In the methods which are claimed in the present invention, the chemical reaction that takes place between lead oxide and different sulfated compounds occurs in a single high temperature treatment. The sulfated compounds used in the present invention to produce the tetrabasic lead sulfate are: PbSO_4 , $3\text{PbO}\cdot\text{PbSO}_4\cdot\text{H}_2\text{O}$, H_2SO_4 and $(\text{NH}_4)_2\text{SO}_4$. The present invention also claims the lead-acid battery pastes produced using the tetrabasic lead sulfate made according to the methods claimed, the lead-acid battery plates made with said pastes, and the lead-acid batteries subsequently made with them.